

## REMARKS

The office action dated March 17, 2006 (the “Office Action”) has been received and carefully noted. Claims 1-14 and 29-37 were examined. Claims 1-14 and 29-37 were rejected. Claims 1, 6-8, 29, 33-34 are amended. Support for the amendments can be found in, for example, paragraphs [0023] and [0025]. As such, no new matter has been added. Claims 1-14 and 29-37 remain in the Application.

### Claims Rejected as Obviousness-type Double Patenting

Claims 1-14 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 6,756,620 to Li et al. (“*Li*”). An obviousness-type double patenting rejection should make clear (1) the differences between the inventions defined by the conflicting claims, i.e., a claim in the patent compared to a claim in the application; and (2) the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in a claim in the patent. MPEP 804. As a preliminary matter, Applicants respectfully submit that the Examiner has not met his burden in issuing the obviousness-type double patenting rejection with respect to claims 1-14 and claims 29-37. The Examiner has merely stated that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to form [the subject matter of claim 1 or 29] by introducing [the subject matter of claim 5 of *Li*].” (Office Action, page 3) This statement is not an explanation of the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in a claim in the patent, but, instead, is a mere statement without any context.

Moreover, even assuming the Examiner has met his initial burden, Applicants respectfully submit that claim 1 and its respective dependent claims is not an obvious variation of claim 5 of *Li*. Independent claim 1 includes the limitation of “a metal nitride layer adjacent to the first metal electrode layer *wherein the metal nitride layer comprises an excess of holes in the metal nitride layer.*” (claim 1) The excess of holes can be induced by a process such as, for example, doping with hafnium or deposition of the metal nitride layer in the presence of excess nitrogen. (see, e.g., claim 6, 8) *Li* does not teach or suggest the limitation of a metal nitride layer

adjacent to the first metal electrode layer wherein the metal nitride layer comprises an excess of holes in the metal nitride layer. Dependent claims 2-14 depend on independent claim 1 and therefore include all of its limitations. Accordingly, Applicants respectfully submit that claim 1 and its respective dependent claims are patentable over *Li*.

Applicants respectfully submit that claim 29 and its respective dependent claims is not an obvious variation of claim 5 of *Li*. Independent claim 29 includes the limitation of “a metal nitride layer, ***wherein the metal nitride layer comprises an excess of electron traps in the metal nitride layer.***” (claim 29) The excess of holes can be induced by a process such as, for example, doping with hafnium or deposition of the metal nitride layer in the presence of excess nitrogen. (see, e.g., claim 33-34) *Li* does not teach or suggest the limitation of a metal nitride layer, wherein the metal nitride layer comprises an excess of electron traps in the metal nitride layer. Dependent claims 30-37 depend on independent claim 29 and therefore include all of its limitations. Accordingly, Applicants respectfully submit that claim 29 and its respective dependent claims are patentable over *Li*.


### CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-14 and 29-37, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800 x766.

Respectfully submitted,

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Dated: 6/5, 2006

  
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### CERTIFICATE OF MAILING

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Melissa Stead      June 5, 2006